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for Patents, P.O. Box 1450, Alexandria, VA 22313-1450



IFW

Date: November 17, 2005

#### THE UNITED STATES PATENT AND TRADEMARK OFFICE

#### **Patent Application**

Applicant(s): Bolle et al.

Docket No:

YOR919990588US3

Serial No.:

10/653,804

Filing Date:

September 3, 2003

Group:

2623

Examiner:

Mehrdad Dastouri

Title:

System and Method for Distortion Characterization in Fingerprint and Palm-Print

Image Sequences and Using this Distortion as a Behavioral Biometrics

### SUBMISSION OF NON-PATENT REFERENCES CITED IN AN INFORMATION DISCLOSURE STATEMENT

Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In response to the Examiner's request in an Office Action dated May 24, 2005, Applicants submit herewith copies of non-patent literatures indicated in the Information Disclosure Statement filed September 3, 2003(copy enclosed) in the above-referenced application.

In the event of non-payment or improper payment of a required fee, the Commissioner is authorized to charge or the credit International Business Machines Corporation's Deposit Account No. 50-0510 as required to correct the error.

Respectfully submitted,

Date: November 17, 2005

Kevin M. Mason

Attorney for Applicant(s)

Kei U Man

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Fairfield, CT 06824 (203) 255-6560

Attorney Docket No.: YOR919990588US2



## TED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Rudolf Maarten Bolle

Chitra Dorai Nalini K. Ratha

**Docket No.:** YOR919990588US2

Serial No.:

Unassigned

Filing Date: Concurrently Herewith

Title:

SYSTEM AND METHOD FOR DISTORTION CHARACTERIZATION IN

FINGERPRINT AND PALM-PRINT IMAGE SEQUENCES AND USING

THIS DISTORTION AS A BEHAVIORAL BIOMETRICS

#### INFORMATION DISCLOSURE STATEMENT

Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, Applicant's attorney wishes to bring to the attention of the Patent and Trademark Office the following document(s) listed on the accompanying PTO Form 1449. Copies of non-patent documents can be provided upon Examiner's request.

#### **U.S. Patent Documents**

- 1. U.S. Patent No. 5,933,515
- 2. U.S. Patent No. 6,323,846
- 3. U.S. Patent No. 6,388,657
- 4. U.S. Patent No. 6,466,686
- 5. U.S. Patent No. 6,487,306

#### Other Documents

6. Bergen et al., "Hierarchical Model-Based Motion Estimation," pgs. 237, 251

(May 1992).7. Dorai et al., "Extracting Motion Annotations from MPEG-2 Compressed Video for HDTV Content Management Applications," International Conference on Multimedia Computing and Systems, June 7-11, 1999 Florence Italy, IEEE Multimedia Systems '99, Vol. 1, pgs. 673-678 (1999). 8. Haskell et al., "Digital Video: An Introduction to MPEG-2," Motion

Compensation Modes in MPEG, Chapter 7, pgs. 146-155 (1997).

9. Nalwa, V.S., "Automatic On-Line Signature Verification," Proceedings of the IEEE, Vol. 85, No. 2, pgs. 215-239 (February 1997).

10. Ratha et al., "Adaptive Flow Orientation-Based Feature Extraction in Fingerprint Images," Pattern Recognition, Vol. 28, No. 11, pgs. 1657-1672

11. Ratha et al., "A Real-Time Matching System for Large Fingerprint Database," IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 18, No. 8, pgs. 799-813 (1996).

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made, or as an admission that the information cited is considered to be material to patentability or that no other material information exists.

Respectfully submitted,

Date: September 3, 2003

Robert J. Mauri Attorney for Applicants Reg. No. 41,180 Ryan, Mason & Lewis, LLP 1300 Post Road, Suite 205 Fairfield, CT 06824 (203) 255-6560



# FORM PTO-1449 (MODIFIED)



Applicant:

Rudolf Maarten Bolle

Chitra Dorai

Nalini K. Ratha YOR919990588US2

Docket No.: Serial No.: Filing Date:

Unassigned Concurrently Herewith Unassigned

Group:

LIST OF PUBLICATIONS FOR
APPLICANT'S INFORMATION
DISCLOSURE STATEMENT

U.S. PATENT DOCUMENTS						
EXAMINER	DOCUMENT NO.	DATE	NAME	CLASS/SUBCLASS	FILING DATE  IF APPROPRIATE	
INITIAL	5,933,515	08/03/99	Pu et al.			
<del></del> _	6,323,846	11/01	Westerman et al.	345/173		
	6,388,657	05/02	Natoli et al.	345/168		
	6,466,686	10/02	Senior, Andrew William	382/124		
	6,487,306	11/02	Jain et al.	382/125		
		FOR	EIGN PATENT DOCUMENTS			
EXAMINER INITIAL	DOCUMENT NO.	DATE	COUNTRY	CLASS/SUBCLASS	TRANSLATION YES NO	
<del></del>	-					
			OTHER DOCUMENTS	5		
EXAMINER			OTHER DOCUMENTS			
NITIAL	REF NO. AUT	HOR, TITLE, DATE, PE	ERTINENT PAGES, ETC.			
	Bergen et al., "Hierarchical Model-Based Motion Estimation," pgs. 237, 251 (May 1992).					
	Dorai et al., "Extracting Motion Annotations from MPEG-2 Compressed Video for HDTV Content Management Applications," International Conference on Multimedia Computing and Systems, June 7-11, 1999, Florence Italy, IEEE Multimedia Systems '99, Vol. 1, pgs. 673-678 (1999).					
	Haskell et al., "Digital Video: An Introduction to MPEG-2," Motion Compensation Modes in MPEG, Chapter 7, pgs. 146-155 (1997).					
	Nalwa, V.S., "Automatic On-Line Signature Verification," Proceedings of the IEEE, Vol. 85, No. 2, pgs. 215-239 (February 1997).					
	Ratha et al., "Adaptive Flow Orientation-Based Feature Extraction in Fingerprint Images," Pattern Recognition, Vol. 28, No. 11, pgs. 1657-1672 (1995).					
	Ratha et al., "A Real-Time Matching System for Large Fingerprint Database," IEEE Transactions of Pattern Analysis and Machine Intelligence, Vol. 18, No. 8, pgs. 799-813 (1996).					
Examiner				Date Consider	ed	

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant. Page 1 of 2